

CLAIM SET AS AMENDED

1-24. (Canceled)

25. (Currently Amended) A printed circuit board (PCB) assembly comprising:

- a plurality of components in said PCB assembly having two sets of different thermal properties over an operating range of said PCB assembly;
- a first component set having heat generating properties;
- a second component set having heat dissipating ~~and/or~~ and magnetic properties;

means for thermally linking said first component set to said second component set whereby heat generated by at least one component from said first component set is dissipated by at least one component from said second component set.

26. (Previously Presented) The PCB as claimed in claim 25 wherein the thermally linking means comprises a heat conductive coupling material to couple at least one component from said first component set to at least one component from said second component set.

27. (Previously Presented) The PCB as claimed in claim 26, in which said heat conductive coupling material is in direct contact with one of said components.

28. (Previously Presented) The PCB as claimed in claim 26, in which said heat conductive coupling material is housed within at least one of said components.
29. (Previously Presented) The PCB as claimed in claim 26, in which said heat conductive coupling material forms tracks on said board.
30. (Previously Presented) The PCB as claimed in claim 26, in which said heat conductive coupling material forms pads on said board.
31. (Previously Presented) The PCB as claimed in claim 26, in which said heat conductive coupling material forms thermal vias with one component on one side of said board and said other component on the opposite side.
32. (Previously Presented) The PCB as claimed in claim 26, in which said heat conductive coupling material is a conformable thermally conductive material.
33. (Previously Presented) The PCB as claimed in claim 25, in which said components are in close physical proximity with minimal air gap between them.
34. (Previously Presented) The PCB as claimed in claim 25, in which said heat-generating component is housed at least partially within said heat-dissipating component.

35. (Previously Presented) The PCB as claimed in claim 25, in which said heat dissipating component is mounted above the heat generating component.

36. (Previously Presented) The PCB as claimed in claim 25, in which a magnetic component from said second component set is a separate magnetic surface mount PCB carrying plug-in interconnect legs for mounting on said board.

37. (Previously Presented) The PCB as claimed in claim 36, in which said surface mount PCB is a multilayer circuit board.

38. (Previously Presented) The PCB as claimed in claim 36, in which said surface mount PCB forms part of a power converter comprising power semi-conductors on said board below said surface mount PCB and in which a layer of conformable thermally conductive material fills the space between the bottom of said surface mount PCB and said power semi-conductors.

39. (Previously Presented) The PCB as claimed in claim 25, in which said heat-dissipating component is thermally linked to more than one heat-generating component.

40. (Previously Presented) The PCB as claimed in claim 25, in which said heat-generating component is thermally linked to more than one heat-dissipating component.

41. (Previously Presented) The PCB as claimed in claim 25, in which when said heat generating and said dissipating components have different thermal attributes over said PCB operating range, the choice of components for thermal linking is chosen to provide optimum heat transfer over said PCB operating range.

42. (Previously Presented) A printed circuit board (PCB) assembly comprising:

- a plurality of components in said PCB assembly having two sets of different thermal properties over an operating range of said PCB assembly;
- a first component set having heat generating properties;
- a second component set having heat dissipating and/or magnetic properties, at least one component comprising a magnetic element having a separate magnetic element surface mount PCB carrying plug-in legs for mounting on said board of said PCB assembly;
- means for thermally linking said first component set to said second component set whereby heat generated by at least one component from said first component set is dissipated by at least one component from said second component set.

43. (Previously Presented) The PCB as claimed in claim 42 wherein the thermally linking means comprises a heat conductive coupling material to couple at least one component from said first component set to at least one component from said second component set.

44. (Previously Presented) The PCB as claimed in claim 42, in which said magnetic element surface mount PCB is a multilayer circuit board.

45. (Previously Presented) A power converter having a printed circuit board (PCB) assembly comprising:

a plurality of power semi-conductor components in said PCB assembly having two sets of different thermal properties over an operating range of several PCB assembly;

a first component set having heat generating properties;

a second component set having heat dissipating and/or magnetic properties, at least one component comprising a magnetic element having a separate magnetic element surface mount PCT carrying plug-in legs for mounting on said board of said PCB assembly;

means for thermally linking said first component set to said second component set whereby heat generated by at least one component from said first component set is dissipated by at least one component from said second component set.

46. (Previously Presented) The power converter as claimed in claim 45 wherein the thermally linking means comprises a heat conductive coupling material to couple at least one component from said first component set to at least one component from said second component set.

47. (Previously Presented) The power converter as claimed in claim 45, in which said surface mount PCB is arranged above said semi-conductor elements.

48. (Previously Presented) The power converter as claimed in claim 45, in which a layer of conformable thermally conductive material fills the space between the bottom of said surface mount PCB and said power semi-conductors.